# Table K2. - Soil Features

Rockingham County, Virginia

Absence of an entry indicates that the feature is not a concern or that data were not estimated.

| Map Symbol               |                  | Restrict        | ive Layer |                 | Subsi   | dence | Potential           | Risk of C         | Corrosion |
|--------------------------|------------------|-----------------|-----------|-----------------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name            | Kind             | Depth<br>to Top | Thickness | Hardness        | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                          |                  | In              | In        |                 | In      | In    |                     |                   |           |
| 1B:<br>Allegheny         |                  |                 |           |                 |         |       |                     | Low               | High      |
| 2B:<br>Allegheny         |                  |                 |           |                 |         |       | Low                 | Low               | High      |
| 3B:<br>Allegheny         |                  |                 |           |                 |         |       |                     | Low               | High      |
| Monongahela              | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | High              | High      |
| Purdy                    |                  |                 |           |                 |         |       |                     |                   |           |
| Wet spots                |                  |                 |           |                 |         |       |                     |                   |           |
| 4A:<br>Aquic Udifluvents |                  |                 |           |                 |         |       |                     |                   |           |
| 5C2:<br>Berks            | Bedrock (lithic) | 20-40           |           | Indurated       |         |       | Low                 | Low               | High      |

| Map Symbol      |                      | Restrict        | ive Layer |                        | Subs    | sidence | Potential           | Risk of Corrosion |          |
|-----------------|----------------------|-----------------|-----------|------------------------|---------|---------|---------------------|-------------------|----------|
| and Soil Name   | Kind                 | Depth<br>to Top | Thickness | Hardness               | Initial | Total   | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                 |                      | In              | In        |                        | In      | In      | •                   |                   |          |
| 5C2:<br>Weikert | Bedrock (paralithic) | 10-20           |           | Moderately cemented    |         |         | Moderate            | Moderate          | Moderate |
| VVCINCIT        | bedrock (parantine)  | 10-20           |           | Moderatory comented    |         |         | Woderate            | Moderate          | Woderate |
|                 | Bedrock (lithic)     | 10-20           |           | Very strongly cemented |         |         |                     |                   |          |
| 5D2:            |                      |                 |           |                        |         |         |                     |                   |          |
| Berks           | Bedrock (lithic)     | 20-40           |           | Indurated              |         |         | Low                 | Low               | High     |
| Weikert         | Fragipan             |                 |           | Weakly cemented        |         |         | Moderate            | Moderate          | Moderate |
|                 | Bedrock (paralithic) | 10-20           |           | Moderately cemented    |         |         |                     |                   |          |
|                 | Bedrock (lithic)     | 10-20           |           | Very strongly cemented |         |         |                     |                   |          |
| Wet spots       |                      |                 |           |                        |         |         |                     |                   |          |
| 6C2:            |                      |                 |           |                        |         |         |                     |                   |          |
| Berks           | Bedrock (lithic)     | 20-40           |           | Indurated              |         |         | Low                 | Low               | High     |
| Weikert         | Bedrock (paralithic) | 10-20           |           | Moderately cemented    |         |         | Moderate            | Moderate          | Moderate |
|                 | Bedrock (lithic)     | 10-20           |           | Very strongly cemented |         |         |                     |                   |          |
| Wet spots       |                      |                 |           |                        |         |         |                     |                   |          |

Rockingham County, Virginia

| Map Symbol    |                      | Restrict        | ve Layer  |                        | Subsi   | dence | Potential           | Risk of C         | Corrosion |
|---------------|----------------------|-----------------|-----------|------------------------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name | Kind                 | Depth<br>to Top | Thickness | Hardness               | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|               | •                    | In              | In        |                        | In      | In    |                     |                   |           |
| SD2:<br>Berks | Bedrock (lithic)     | 20-40           |           | Indurated              |         |       | Low                 | Low               | High      |
| Weikert       | Bedrock (paralithic) | 10-20           |           | Moderately cemented    |         |       | Moderate            | Moderate          | Moderate  |
|               | Bedrock (lithic)     | 10-20           |           | Very strongly cemented |         |       |                     |                   |           |
| Wet spots     |                      |                 |           |                        |         |       |                     |                   |           |
| A:            |                      |                 |           |                        |         |       |                     |                   |           |
| Buchanan      | Fragipan             |                 |           | Weakly cemented        |         |       | Moderate            | High              | High      |
| Purdy         |                      |                 |           |                        |         |       |                     |                   |           |
| B:            |                      |                 |           |                        |         |       |                     |                   |           |
| Buchanan      | Fragipan             |                 |           | Weakly cemented        |         |       | Moderate            | High              | High      |
| Purdy         |                      |                 |           |                        |         |       |                     |                   |           |
| C:            |                      |                 |           |                        |         |       |                     |                   |           |
| Buchanan      | Fragipan             |                 |           | Weakly cemented        |         |       | Moderate            | High              | High      |
| Purdy         |                      |                 |           |                        |         |       |                     |                   |           |

9C:

| Map Symbol        |                  | Restric         | tive Layer |                 | Subsi   | dence | Potential           | Risk of (         | Corrosion |
|-------------------|------------------|-----------------|------------|-----------------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name     | Kind             | Depth<br>to Top | Thickness  | Hardness        | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                   |                  | In              | In         |                 | In      | In    | •                   | •                 | •         |
| 9C:<br>Buchanan   | Fragipan         |                 |            | Weakly cemented |         |       | Moderate            | High              | High      |
| Purdy             |                  |                 |            |                 |         |       |                     |                   |           |
| 10A:<br>Buckton   |                  |                 |            |                 |         |       | Moderate            | Low               | Low       |
| Wet spots         |                  |                 |            |                 |         |       |                     |                   |           |
| 11B:<br>Burketown | Fragipan         |                 |            | Weakly cemented |         |       | Moderate            | Moderate          | Moderate  |
| Wet spots         |                  |                 |            |                 |         |       |                     |                   |           |
| 12B:<br>Carbo     | Bedrock (lithic) | 20-40           |            | Indurated       |         |       | Moderate            | High              | Low       |
| Endcav            | Bedrock (lithic) | 40-60           |            | Indurated       |         |       | Moderate            | High              | Low       |
| Rock outcrop      | Bedrock (lithic) | 0               |            |                 |         |       |                     |                   |           |
| 12C:<br>Carbo     | Bedrock (lithic) | 20-40           |            | Indurated       |         |       | Moderate            | High              | Low       |

| Map Symbol    |                  | Restrict        | ive Layer |           | Subsid  | dence | Potential           | Risk of C         | Corrosion |
|---------------|------------------|-----------------|-----------|-----------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name | Kind             | Depth<br>to Top | Thickness | Hardness  | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|               | •                | In              | In        |           | In      | In    |                     |                   |           |
| 12C:          |                  |                 |           |           |         |       |                     |                   |           |
| Endcav        | Bedrock (lithic) | 40-60           |           |           |         |       | Moderate            | High              | Low       |
| Rock outcrop  | Bedrock (lithic) | 0               |           |           |         |       |                     |                   |           |
| 13A:          |                  |                 |           |           |         |       |                     |                   |           |
| Chavies       |                  |                 |           |           |         |       |                     | Low               | Moderate  |
| Wet spots     |                  |                 |           |           |         |       |                     |                   |           |
| 14B2:         |                  |                 |           |           |         |       |                     |                   |           |
| Chilhowie     | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Moderate            | High              | Low       |
| Wet spots     |                  |                 |           |           |         |       |                     |                   |           |
| 14C2:         |                  |                 |           |           |         |       |                     |                   |           |
| Chilhowie     | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Moderate            | High              | Low       |
| Wet spots     |                  |                 |           |           |         |       |                     |                   |           |
| 14D2:         |                  |                 |           |           |         |       |                     |                   |           |
| Chilhowie     | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Moderate            | High              | Low       |
| Wet spots     |                  |                 |           |           |         |       |                     |                   |           |

Rockingham County, Virginia

| Map Symbol         |                   | Restricti          | ive Layer |           | Subsi   | dence | Potential           | Risk of C         | Corrosion |
|--------------------|-------------------|--------------------|-----------|-----------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name      | Kind              | Depth<br>to Top    | Thickness | Hardness  | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                    |                   | In                 | In        |           | In      | In    |                     |                   |           |
| 15B2:<br>Chilhowie | Bedrock (lithic)  | 20-40              |           | Indurated |         |       | Moderate            | High              | Low       |
|                    |                   |                    |           |           |         |       |                     |                   |           |
| 15C2:              |                   |                    |           |           |         |       |                     |                   |           |
| Chilhowie          | Bedrock (lithic)  | 20-40              |           | Indurated |         |       | Moderate            | High              | Low       |
| W/st so sts        |                   |                    |           |           |         |       |                     |                   |           |
| Wet spots          |                   |                    |           |           |         |       |                     |                   |           |
| 15D2:              |                   |                    |           |           |         |       |                     |                   |           |
| Chilhowie          | Bedrock (lithic)  | 20-40              |           | Indurated |         |       | Moderate            | High              | Low       |
|                    |                   |                    |           |           |         |       |                     |                   |           |
| Wet spots          |                   |                    |           |           |         |       |                     |                   |           |
| 4050.              |                   |                    |           |           |         |       |                     |                   |           |
| 16E3:<br>Chilhowie | Bedrock (lithic)  | 20-40              |           | Indurated |         |       | Moderate            | High              | Low       |
|                    |                   |                    |           |           |         |       |                     |                   |           |
| Wet spots          |                   |                    |           |           |         |       |                     |                   |           |
|                    |                   |                    |           |           |         |       |                     |                   |           |
| 17B2:<br>Chilhowie | Bedrock (lithic)  | 20-40              |           | Indurated |         |       | Moderate            | High              | Low       |
| Chimowie           | Deurock (IIIIIIC) | 20 <del>-4</del> 0 |           | muurateu  |         |       | iviouerate          | піуп              | LUW       |
| Edom               | <del></del>       |                    |           |           |         |       | Moderate            | High              | Low       |
|                    |                   |                    |           |           |         |       | <del>-</del>        | 3                 | -         |

17C2:



| Map Symbol     |                  | Restrict        | ive Layer |           | Subsi   | dence | Potential           | Risk of Corrosion |          |
|----------------|------------------|-----------------|-----------|-----------|---------|-------|---------------------|-------------------|----------|
| and Soil Name  | Kind             | Depth<br>to Top | Thickness | Hardness  | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                | •                | In              | In        |           | In      | In    |                     |                   |          |
| 17C2:          |                  |                 |           |           |         |       |                     |                   |          |
| Chilhowie      | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Moderate            | High              | Low      |
| Edom           |                  |                 |           |           |         |       | Moderate            | High              | Low      |
| 17D2:          |                  |                 |           |           |         |       |                     |                   |          |
| Chilhowie      | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Moderate            | High              | Low      |
| Edom           |                  |                 |           |           |         |       | Moderate            | High              | Low      |
| 18B:           |                  |                 |           |           |         |       |                     |                   |          |
| Cotaco         |                  |                 |           |           |         |       |                     | Moderate          | High     |
| Purdy          |                  |                 |           |           |         |       |                     |                   |          |
| 19B:           |                  |                 |           |           |         |       |                     |                   |          |
| Cotaco         |                  |                 |           |           |         |       |                     | Moderate          | High     |
| Purdy          |                  |                 |           |           |         |       |                     |                   |          |
| 20B:           |                  |                 |           |           |         |       |                     |                   |          |
| Cotaco variant |                  |                 |           |           |         |       | High                | High              | High     |
| Purdy          | <del></del>      |                 |           |           |         |       |                     |                   |          |

Rockingham County, Virginia

| Map Symbol    |                  | Restricti       | ve Layer  |             | Subsi   | dence | Potential           | Risk of Corrosion |                  |
|---------------|------------------|-----------------|-----------|-------------|---------|-------|---------------------|-------------------|------------------|
| and Soil Name | Kind             | Depth<br>to Top | Thickness | Hardness    | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete         |
|               |                  | In              | In        |             | In      | ln    |                     |                   |                  |
| 21B:          |                  |                 |           |             |         |       | NA - d 4 -          | NA                | NA - d - v - t - |
| Craigsville   |                  |                 |           | <del></del> |         |       | Moderate            | Moderate          | Moderate         |
| Wet spots     |                  |                 |           |             |         |       |                     |                   |                  |
| 22F:          |                  |                 |           |             |         |       |                     |                   |                  |
| Drall         | Bedrock (lithic) | 40-60           |           | Indurated   |         |       | Low                 | Low               | High             |
| 23B2:         |                  |                 |           |             |         |       |                     |                   |                  |
| Edom          |                  |                 |           |             |         |       | Moderate            | High              | Low              |
| Wet soils     |                  |                 |           |             |         |       |                     |                   |                  |
| 23C2:         |                  |                 |           |             |         |       |                     |                   |                  |
| Edom          |                  |                 |           |             |         |       | Moderate            | High              | Low              |
| Wet soils     |                  |                 |           |             |         |       |                     |                   |                  |
| 23D2:         |                  |                 |           |             |         |       |                     |                   |                  |
| Edom          |                  |                 |           |             |         |       | Moderate            | High              | Low              |
| Wet soils     |                  |                 |           |             |         |       |                     |                   |                  |

24B2:



| Map Symbol    |                      | Restrict        | ive Layer |                      | Subsi   | dence | Potential           | Risk of Corrosion |          |
|---------------|----------------------|-----------------|-----------|----------------------|---------|-------|---------------------|-------------------|----------|
| and Soil Name | Kind                 | Depth<br>to Top | Thickness | Hardness             | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|               |                      | In              | In        | <u> </u>             | In      | In    |                     |                   |          |
| 24B2:         |                      |                 |           |                      |         |       |                     |                   |          |
| Endcav        | Bedrock (lithic)     | 40-60           |           | Indurated            |         |       | Moderate            | High              | Low      |
| Wet soils     |                      |                 |           |                      |         |       |                     |                   |          |
| 24C2:         |                      |                 |           |                      |         |       |                     |                   |          |
| Endcav        | Bedrock (lithic)     | 40-60           |           | Indurated            |         |       | Moderate            | High              | Low      |
| Wet soils     |                      |                 |           |                      |         |       |                     |                   |          |
| 25B2:         |                      |                 |           |                      |         |       |                     |                   |          |
| Endcav        | Bedrock (lithic)     | 40-60           |           | Indurated            |         |       | Moderate            | High              | Low      |
| Wet soils     |                      |                 |           |                      |         |       |                     |                   |          |
| 25C2:         |                      |                 |           |                      |         |       |                     |                   |          |
| Endcav        | Bedrock (lithic)     | 40-60           |           | Indurated            |         |       | Moderate            | High              | Low      |
| Wet soils     |                      |                 |           |                      |         |       |                     |                   |          |
| 26C2:         |                      |                 |           |                      |         |       |                     |                   |          |
| Fauquier      | Bedrock (paralithic) | 42-60           |           | Very weakly cemented |         |       | Moderate            | High              | High     |
| 6D2:          |                      |                 |           |                      |         |       |                     |                   |          |

| Map Symbol           |                      | Restricti       | ve Layer  |                      | Subsi   | dence | Potential           | Risk of C         | corrosion |
|----------------------|----------------------|-----------------|-----------|----------------------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name        | Kind                 | Depth<br>to Top | Thickness | Hardness             | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                      |                      | In              | In        |                      | In      | In    |                     |                   |           |
| 26D2:<br>Fauquier    | Bedrock (paralithic) | 42-60           |           | Very weakly cemented |         |       | Moderate            | High              | High      |
| 27E:                 | 5                    |                 |           |                      |         |       |                     |                   |           |
| Fauquier             | Bedrock (paralithic) | 42-60           |           | Very weakly cemented |         |       | Moderate            | High              | High      |
| 28A:                 |                      |                 |           |                      |         |       |                     |                   |           |
| Fluvaquents          |                      |                 |           |                      |         |       |                     |                   |           |
| Poorly drained soils |                      |                 |           |                      |         |       |                     |                   |           |
| 29B2:                |                      |                 |           |                      |         |       |                     |                   |           |
| Frederick            |                      |                 |           |                      |         |       | Moderate            | Moderate          | High      |
| Lodi                 |                      |                 |           |                      |         |       | Moderate            | Moderate          | High      |
|                      |                      |                 |           |                      |         |       |                     |                   |           |
| 29C2:<br>Frederick   |                      |                 |           |                      |         |       | Moderate            | Moderate          | High      |
| Lodi                 |                      |                 |           |                      |         |       | Moderate            | Moderate          | High      |
| 29D2:                |                      |                 |           |                      |         |       |                     |                   |           |
| Frederick            |                      |                 |           |                      |         |       | Moderate            | Moderate          | High      |

| Map Symbol         |             | Restrict        | ive Layer |          | Subsi   | dence | Potential           | Risk of Corrosion |          |
|--------------------|-------------|-----------------|-----------|----------|---------|-------|---------------------|-------------------|----------|
| and Soil Name      | Kind        | Depth<br>to Top | Thickness | Hardness | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                    |             | In              | In        |          | In      | In    |                     |                   |          |
| 29D2:              |             |                 |           |          |         |       |                     |                   |          |
| Lodi               |             |                 |           |          |         |       | Moderate            | Moderate          | High     |
| 9E2:               |             |                 |           |          |         |       |                     |                   |          |
| Frederick          |             |                 |           |          |         |       | Moderate            | Moderate          | High     |
| Lodi               |             |                 |           |          |         |       | Moderate            | Moderate          | High     |
|                    |             |                 |           |          |         |       |                     |                   | 9        |
| SOC3:<br>Frederick |             |                 |           |          |         |       | Madausta            | Madazeta          | l limb   |
| Frederick          | <del></del> |                 |           |          |         |       | Moderate            | Moderate          | High     |
| Lodi               |             |                 |           |          |         |       | Moderate            | Moderate          | High     |
|                    |             |                 |           |          |         |       |                     |                   |          |
| 0D3:<br>Frederick  |             |                 |           |          |         |       | Moderate            | Moderate          | High     |
|                    |             |                 |           |          |         |       |                     |                   |          |
| Lodi               |             |                 |           |          |         |       | Moderate            | Moderate          | High     |
| 1B2:               |             |                 |           |          |         |       |                     |                   |          |
| Frederick          |             |                 |           |          |         |       | Moderate            | Moderate          | High     |
|                    |             |                 |           |          |         |       |                     |                   |          |
| Lodi               |             |                 |           |          |         |       | Moderate            | Moderate          | High     |
| C2:                |             |                 |           |          |         |       |                     |                   |          |

| Map Symbol         |      | Restrict        | ive Layer |          | Subsi   | dence | Potential           | Risk of C         | Corrosion |
|--------------------|------|-----------------|-----------|----------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name      | Kind | Depth<br>to Top | Thickness | Hardness | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                    |      | In              | In        |          | In      | In    |                     |                   |           |
| 31C2:<br>Frederick |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Lodi               |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| 31D2:<br>Frederick |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| redeficie          |      |                 |           |          |         |       | Woderate            | Woderate          | riigii    |
| Lodi               |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| 1E2:<br>Frederick  |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Troughor           |      |                 |           |          |         |       | Moderate            | Moderate          | . ng      |
| Lodi               |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| 2C:                |      |                 |           |          |         |       |                     |                   |           |
| Frederick          |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Lodi               |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| 2D:                |      |                 |           |          |         |       |                     |                   |           |
| Frederick          |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Lodi               |      |                 |           |          |         |       | Moderate            | Moderate          | High      |

| Map Symbol        |      | Restricti       | ve Layer  |          | Subsid  | dence | Potential           | Risk of C         | Corrosion |
|-------------------|------|-----------------|-----------|----------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name     | Kind | Depth<br>to Top | Thickness | Hardness | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                   |      | In              | In        |          | In      | In    | •                   |                   |           |
| 32E:<br>Frederick |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Lodi              |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| 33B2:             |      |                 |           |          |         |       | Madazata            | Madanta           | I Cada    |
| Frederick         |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Lodi              |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| 33C2:             |      |                 |           |          |         |       |                     |                   | 18.1      |
| Frederick         |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Lodi              |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| 33D2:             |      |                 |           |          |         |       |                     |                   |           |
| Frederick         |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Lodi              |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| 33E2:             |      |                 |           |          |         |       |                     |                   |           |
| Frederick         |      |                 |           |          |         |       | Moderate            | Moderate          | High      |
| Lodi              |      |                 |           |          |         |       | Moderate            | Moderate          | High      |

| Map Symbol           |                  | Restrict        | ive Layer |             | Subsi   | dence | Potential           | Risk of Corrosion |          |
|----------------------|------------------|-----------------|-----------|-------------|---------|-------|---------------------|-------------------|----------|
| and Soil Name        | Kind             | Depth<br>to Top | Thickness | Hardness    | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                      |                  | In              | ln        |             | In      | In    |                     |                   |          |
| 34C:<br>Frederick    |                  |                 |           |             |         |       | Moderate            | Moderate          | High     |
| Rock outcrop         | Bedrock (lithic) | 0               |           |             |         |       |                     |                   |          |
| 34E:<br>Frederick    |                  |                 |           |             |         |       | Moderate            | Moderate          | High     |
| Tredefick            | <del></del>      |                 |           | <del></del> |         |       | Woderate            | Moderate          | riigii   |
| Rock outcrop         | Bedrock (lithic) | 0               |           |             |         |       |                     |                   |          |
| 5B:                  |                  |                 |           |             |         |       |                     |                   |          |
| Guernsey             |                  |                 |           |             |         |       | High                | High              | Moderate |
| Poorly drained soils |                  |                 |           |             |         |       |                     |                   |          |
| 6B:                  |                  |                 |           |             |         |       |                     |                   |          |
| Hawksbill            |                  |                 |           |             |         |       | Moderate            | Low               | Moderate |
| Wet spots            |                  |                 |           |             |         |       |                     |                   |          |
| 7B:                  |                  |                 |           |             |         |       |                     |                   |          |
| Hawksbill            |                  |                 |           |             |         |       | Moderate            | Low               | Moderate |
| Wet spots            |                  |                 |           |             |         |       |                     |                   |          |

| Map Symbol        |            | Restrict        | ive Layer |                 | Subsi   | dence | Potential           | Risk of Corrosion |          |
|-------------------|------------|-----------------|-----------|-----------------|---------|-------|---------------------|-------------------|----------|
| and Soil Name     | Kind       | Depth<br>to Top | Thickness | Hardness        | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                   |            | In              | In        |                 | In      | In    |                     |                   |          |
| 38C:<br>Hawksbill |            |                 |           |                 |         |       | Moderate            | Low               | Moderate |
| Wet spots         |            |                 |           |                 |         |       |                     |                   |          |
| 39B:<br>Laidig    | Fragipan   |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High     |
| · ·               | σ,         |                 |           | ,               |         |       |                     |                   | Ū        |
| 39C:<br>Laidig    | Fragipan   |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High     |
| 40B:<br>Laidig    | Fragipan   |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High     |
|                   |            |                 |           |                 |         |       |                     |                   |          |
| 40C:<br>Laidig    | Fragipan   |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High     |
| 40D:              |            |                 |           |                 |         |       |                     |                   |          |
| Laidig            | Fragipan   |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High     |
| 40E:              |            |                 |           |                 |         |       |                     |                   |          |
| Laidig            | Fragipan   |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High     |
| 41C:              | Francis on |                 |           | Markhusamant-   |         |       | Madanata            | Madanata          | Himb     |
| Laidig            | Fragipan   |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High     |

| Map Symbol     |                  | Restrict        | ive Layer |                 | Subsi   | dence | Potential           | Risk of C         | Corrosion |
|----------------|------------------|-----------------|-----------|-----------------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name  | Kind             | Depth<br>to Top | Thickness | Hardness        | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                | •                | In              | In        |                 | In      | In    | •                   |                   |           |
| 41D:<br>Laidig | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High      |
| 41E:<br>Laidig | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High      |
| 42C:<br>Laidig | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | Moderate          | High      |
| Buchanan       | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | High              | High      |
| 43C:<br>Lehew  | Bedrock (lithic) | 20-40           |           | Indurated       |         |       | Low                 | Low               | High      |
| Dekalb         | Bedrock (lithic) | 20-40           |           |                 |         |       | Low                 | Low               | High      |
| Calvin         | Bedrock (lithic) | 20-40           |           | Indurated       |         |       | Moderate            | Low               | Moderate  |
| 43D:<br>Lehew  | Bedrock (lithic) | 20-40           |           | Indurated       |         |       | Low                 | Low               | High      |
| Dekalb         | Bedrock (lithic) | 20-40           |           |                 |         |       | Low                 | Low               | High      |
| Calvin         | Bedrock (lithic) | 20-40           |           |                 |         |       | Moderate            | Low               | Moderate  |

| Map Symbol         |                  | Restrict        | ive Layer |           | Subsi   | dence | Potential           | Risk of C         | Corrosion |
|--------------------|------------------|-----------------|-----------|-----------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name      | Kind             | Depth<br>to Top | Thickness | Hardness  | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                    |                  | In              | In        |           | In      | In    |                     |                   |           |
| 44E:<br>Lehew      | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Low                 | Low               | High      |
| Dekalb             | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Low                 | Low               | High      |
| Calvin             | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Moderate            | Low               | Moderate  |
| 44F:<br>Lehew      | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Low                 | Low               | High      |
| Dekalb             | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Low                 | Low               | High      |
| Calvin             | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Moderate            | Low               | Moderate  |
| 45A:<br>Massanetta |                  |                 |           |           |         |       | Moderate            | Low               | Low       |
| Wet spots          |                  |                 |           |           |         |       |                     |                   |           |
| 46A:<br>Millrock   |                  |                 |           |           |         |       | Low                 | Low               | Moderate  |
| Wet spots          |                  |                 |           |           |         |       |                     |                   |           |

| Map Symbol           |                  | Restrict        | ive Layer |                 | Subsi   | dence | Potential           | Risk of C         | Corrosion |
|----------------------|------------------|-----------------|-----------|-----------------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name        | Kind             | Depth<br>to Top | Thickness | Hardness        | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                      | •                | In              | In        |                 | In      | In    | •                   |                   |           |
| I7B:<br>Monongahela  | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | High              | High      |
| Purdy                |                  |                 |           |                 |         |       |                     |                   |           |
| I7C2:<br>Monongahela | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | High              | High      |
|                      |                  |                 |           | ,               |         |       |                     | 9                 | 9         |
| Purdy                |                  |                 |           |                 |         |       |                     |                   |           |
| 8B:                  |                  |                 |           |                 |         |       |                     |                   |           |
| Monongahela          | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | High              | High      |
| Purdy                |                  |                 |           |                 |         |       |                     |                   |           |
| 8C:                  |                  |                 |           |                 |         |       |                     |                   |           |
| Monongahela          | Fragipan         |                 |           | Weakly cemented |         |       | Moderate            | High              | High      |
| Purdy                |                  |                 |           |                 |         |       |                     |                   |           |
| 9C:                  |                  |                 |           |                 |         |       |                     |                   |           |
| Myersville           | Bedrock (lithic) | 40-60           |           | Indurated       |         |       | Moderate            | Moderate          | Moderate  |
| 9D:                  |                  |                 |           |                 |         |       |                     |                   |           |

| Map Symbol         |                  | Restricti       | ve Layer  |                 | Subsi   | dence  | Potential           | Risk of C         | Corrosion |
|--------------------|------------------|-----------------|-----------|-----------------|---------|--------|---------------------|-------------------|-----------|
| and Soil Name      | Kind             | Depth<br>to Top | Thickness | Hardness        | Initial | Total  | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
| 49D:<br>Myersville | Bedrock (lithic) | In<br>40-60     | In<br>    | Indurated       | In<br>  | In<br> | Moderate            | Moderate          | Moderate  |
| 49F:<br>Myersville | Bedrock (lithic) | 40-60           |           | Indurated       |         |        | Moderate            | Moderate          | Moderate  |
| 50B:<br>Nixa       | Fragipan         | 14-27           |           | Weakly cemented |         |        |                     | Moderate          | Moderate  |
| Frederick          |                  |                 |           |                 |         |        | Moderate            | Moderate          | High      |
| Lodi               |                  |                 |           |                 |         |        | Moderate            | Moderate          | High      |
| Wet spots          |                  |                 |           |                 |         |        |                     |                   |           |
| 50C:<br>Nixa       | Fragipan         | 14-27           |           | Weakly cemented |         |        |                     | Moderate          | Moderate  |
| Frederick          |                  |                 |           |                 |         |        | Moderate            | Moderate          | High      |
| Lodi               |                  |                 |           |                 |         |        | Moderate            | Moderate          | High      |
| Wet spots          |                  |                 |           |                 |         |        |                     |                   |           |

| Map Symbol                |                  | Restrict        | tive Layer |           | Subsi   | dence | Potential           | Risk of Corrosion |          |
|---------------------------|------------------|-----------------|------------|-----------|---------|-------|---------------------|-------------------|----------|
| and Soil Name             | Kind             | Depth<br>to Top | Thickness  | Hardness  | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                           | •                | ln              | In         |           | In      | In    | •                   |                   |          |
| 51:                       |                  |                 |            |           |         |       |                     |                   |          |
| Pits                      |                  |                 |            |           |         |       |                     |                   |          |
| 52:                       |                  |                 |            |           |         |       |                     |                   |          |
| Pits                      |                  |                 |            |           |         |       |                     |                   |          |
| 53:                       |                  |                 |            |           |         |       |                     |                   |          |
| Pits and dumps            | Bedrock (lithic) | 0               |            |           |         |       |                     |                   |          |
| 54A:                      |                  |                 |            |           |         |       |                     |                   |          |
| Purdy                     |                  |                 |            |           |         |       | High                | High              | High     |
| Very poorly drained soils |                  |                 |            |           |         |       |                     |                   |          |
| 55C:                      |                  |                 |            |           |         |       |                     |                   |          |
| Rock outcrop              | Bedrock (lithic) | 0               |            | Indurated |         |       |                     |                   |          |
| Carbo                     | Bedrock (lithic) | 20-40           |            | Indurated |         |       | Moderate            | High              | Low      |
| 56C:                      |                  |                 |            |           |         |       |                     |                   |          |
| Rock outcrop              | Bedrock (lithic) | 0               |            | Indurated |         |       |                     |                   |          |
| Frederick                 |                  |                 |            |           |         |       | Moderate            | Moderate          | High     |
| 56D:                      |                  |                 |            |           |         |       |                     |                   |          |

| Map Symbol           |                      | Restrict        | ive Layer |                     | Subsi   | dence | Potential           | Risk of Corrosion |          |
|----------------------|----------------------|-----------------|-----------|---------------------|---------|-------|---------------------|-------------------|----------|
| and Soil Name        | Kind                 | Depth<br>to Top | Thickness | Hardness            | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
| 500                  |                      | In              | In        |                     | In      | In    |                     |                   |          |
| 56D:<br>Rock outcrop | Bedrock (lithic)     | 0               |           | Indurated           |         |       |                     |                   |          |
| Frederick            |                      |                 |           |                     |         |       | Moderate            | Moderate          | High     |
| 57E:<br>Rock outcrop | Bedrock (lithic)     | 0               |           | Indurated           |         |       |                     |                   |          |
| Laidig               | Fragipan             |                 |           | Weakly cemented     |         |       | Moderate            | Moderate          | High     |
| 58B2:<br>Sequoia     | Bedrock (paralithic) | 20-40           |           | Moderately cemented |         |       |                     | High              | Moderate |
| Wet soils            |                      |                 |           |                     |         |       |                     |                   |          |
| 58C2:<br>Sequoia     | Bedrock (paralithic) | 20-40           |           | Moderately cemented |         |       |                     | High              | Moderate |
| Wet soils            |                      |                 |           |                     |         |       |                     |                   |          |
| 59B2:<br>Sequoia     | Bedrock (paralithic) | 20-40           |           | Moderately cemented |         |       |                     | High              | Moderate |
| Berks                | Bedrock (lithic)     | 20-40           |           | Indurated           |         |       | Low                 | Low               | High     |

| Map Symbol         |                         | Restrict        | ive Layer |                     | Subsi   | dence | Potential           | Risk of 0         | Corrosion |
|--------------------|-------------------------|-----------------|-----------|---------------------|---------|-------|---------------------|-------------------|-----------|
| and Soil Name      | Kind                    | Depth<br>to Top | Thickness | Hardness            | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete  |
|                    |                         | In              | In        |                     | In      | In    |                     |                   |           |
| 59B2:<br>Wet soils |                         |                 |           |                     |         |       |                     |                   |           |
| 59C2:              |                         |                 |           |                     |         |       |                     |                   |           |
| Sequoia            | Bedrock (paralithic)    | 20-40           |           | Moderately cemented |         |       |                     | High              | Moderate  |
| Berks              | Bedrock (lithic)        | 20-40           |           | Indurated           |         |       | Low                 | Low               | High      |
| 59D2:<br>Sequoia   | Bedrock (paralithic)    | 20-40           |           | Moderately cemented |         |       |                     | High              | Moderate  |
| Berks              | Bedrock (lithic)        | 20-40           |           | Indurated           |         |       | Low                 | Low               | High      |
| Wet soils          |                         |                 |           |                     |         |       |                     |                   |           |
| 60C:               |                         |                 |           |                     |         |       |                     |                   |           |
| Sequoia            | Bedrock (paralithic)    | 20-40           |           |                     |         |       |                     | High              | Moderate  |
| Berks              | Bedrock (lithic)        | 20-40           |           | Indurated           |         |       | Low                 | Low               | High      |
| Wet soils          |                         |                 |           |                     |         |       |                     |                   |           |
| 60D:               | De des de (o see litt.) | 00.40           |           |                     |         |       |                     | I Pada            | Madanat   |
| Sequoia            | Bedrock (paralithic)    | 20-40           |           |                     |         |       |                     | High              | Moderate  |

| Map Symbol<br>and Soil Name |                  | Restrict        | ive Layer |           | Subsi   | dence | Potential           | Risk of C         | orrosion |
|-----------------------------|------------------|-----------------|-----------|-----------|---------|-------|---------------------|-------------------|----------|
| and Soil Name               | Kind             | Depth<br>to Top | Thickness | Hardness  | Initial | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                             | •                | In              | In        |           | In      | In    | •                   |                   |          |
| 60D:                        | 5                |                 |           |           |         |       |                     |                   |          |
| Berks                       | Bedrock (lithic) | 20-40           |           | Indurated |         |       | Low                 | Low               | High     |
| Wet soils                   |                  |                 |           |           |         |       |                     |                   |          |
| 1B:                         |                  |                 |           |           |         |       |                     |                   |          |
| Shelocta variant            |                  |                 |           |           |         |       | Moderate            | Moderate          | High     |
| Wet spots                   |                  |                 |           |           |         |       |                     |                   |          |
| 2C:                         |                  |                 |           |           |         |       |                     |                   |          |
| Shelocta variant            |                  |                 |           |           |         |       | Moderate            | Moderate          | High     |
| Wet spots                   |                  |                 |           |           |         |       |                     |                   |          |
| 3B:                         |                  |                 |           |           |         |       |                     |                   |          |
| Shenval                     |                  |                 |           |           |         |       | Moderate            | High              | High     |
| 3C2:                        |                  |                 |           |           |         |       |                     |                   |          |
| Shenval                     |                  |                 |           |           |         |       | Moderate            | High              | High     |
| 3D2:                        |                  |                 |           |           |         |       |                     |                   |          |
| Shenval                     |                  |                 |           |           |         |       | Moderate            | High              | High     |
| ·C:                         |                  |                 |           |           |         |       |                     |                   |          |

| Map Symbol       |                  | Restric         | tive Layer |           | Subsi   | idence | Potential           | Risk of Corrosion |          |
|------------------|------------------|-----------------|------------|-----------|---------|--------|---------------------|-------------------|----------|
| and Soil Name    | Kind             | Depth<br>to Top | Thickness  | Hardness  | Initial | Total  | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                  |                  | In              | In         |           | In      | ln     | •                   |                   |          |
| 64C:<br>Sherando |                  |                 |            |           |         |        | Low                 | Low               | High     |
| Sileratido       | <del></del>      |                 |            |           |         |        | LOW                 | LOW               | riigii   |
| 64D:             |                  |                 |            |           |         |        |                     |                   |          |
| Sherando, COBBLY |                  |                 |            |           |         |        | Low                 | Low               | High     |
| 65B2:            |                  |                 |            |           |         |        |                     |                   |          |
| Swimley          |                  |                 |            |           |         |        | Moderate            | High              | Moderate |
| Wet spots        |                  |                 |            |           |         |        |                     |                   |          |
| 65C2:            |                  |                 |            |           |         |        |                     |                   |          |
| Swimley          |                  |                 |            |           |         |        | Moderate            | High              | Moderate |
| Wet spots        |                  |                 |            |           |         |        |                     |                   |          |
| 66D:             |                  |                 |            |           |         |        |                     |                   |          |
| Sylco            | Bedrock (lithic) | 20-40           |            | Indurated |         |        | Moderate            | Low               | Moderate |
| 66E:             |                  |                 |            |           |         |        |                     |                   |          |
| Sylco            | Bedrock (lithic) | 20-40           |            | Indurated |         |        | Moderate            | Low               | Moderate |
| 67F:             |                  |                 |            |           |         |        |                     |                   |          |
| Sylco            | Bedrock (lithic) | 20-40           |            | Indurated |         |        | Moderate            | Low               | Moderate |
| 68B:             |                  |                 |            |           |         |        |                     |                   |          |

| Map Symbol<br>and Soil Name             | Restrictive Layer |                 |           |          | Subsidence |       | Potential           | Risk of Corrosion |          |
|---|-------------------|-----------------|-----------|----------|------------|-------|---------------------|-------------------|----------|
|   | Kind              | Depth<br>to Top | Thickness | Hardness | Initial    | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|   | •                 | In              | In        |          | In         | In    |                     |                   |          |
| 88B:<br>Timberville variant             |                   |                 |           |          |            |       | Moderate            | Low               | High     |
|   |                   |                 |           |          |            |       |                     | 20                | 9        |
| 59A:                                    |                   |                 |           |          |            |       |                     |                   |          |
| Tioga                                   |                   |                 |           |          |            |       | Moderate            | Low               | Moderate |
|   |                   |                 |           |          |            |       |                     |                   |          |
| 70A:<br>Typic Udorthents                |                   |                 |           |          |            |       |                     |                   |          |
| .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                   |                 |           |          |            |       |                     |                   |          |
| '1B2:                                   |                   |                 |           |          |            |       |                     |                   |          |
| Unison                                  |                   |                 |           |          |            |       | Moderate            | High              | Moderate |
| '1C2:                                   |                   |                 |           |          |            |       |                     |                   |          |
| Unison                                  |                   |                 |           |          |            |       | Moderate            | High              | Moderat  |
|   |                   |                 |           |          |            |       |                     |                   |          |
| ZB2:                                    |                   |                 |           |          |            |       |                     |                   |          |
| Unison                                  |                   |                 |           |          |            |       | Moderate            | High              | Moderate |
| /2C2:                                   |                   |                 |           |          |            |       |                     |                   |          |
| Unison                                  |                   |                 |           |          |            |       | Moderate            | High              | Moderat  |
|   |                   |                 |           |          |            |       |                     |                   |          |
| 2D2:<br>Unison                          |                   |                 |           |          |            |       | Moderate            | High              | Moderat  |
| Official                                |                   |                 |           |          |            |       | Moderate            | riigii            | Moderat  |
| 3:                                      |                   |                 |           |          |            |       |                     |                   |          |

| Map Symbol<br>and Soil Name | Restrictive Layer    |                 |           |                        | Subsidence |       | Potential           | Risk of Corrosion |          |
|-----------------------------|----------------------|-----------------|-----------|------------------------|------------|-------|---------------------|-------------------|----------|
|                             | Kind                 | Depth<br>to Top | Thickness | Hardness               | Initial    | Total | for Frost<br>Action | Uncoated<br>Steel | Concrete |
|                             |                      | In              | In        |                        | In         | In    | •                   |                   |          |
| 73:                         |                      |                 |           |                        |            |       |                     |                   |          |
| Urban land                  |                      |                 |           |                        |            |       |                     |                   |          |
| 74E2:                       |                      |                 |           |                        |            |       |                     |                   |          |
| Weikert                     | Bedrock (paralithic) | 10-20           |           | Moderately cemented    |            |       | Moderate            | Moderate          | Moderate |
|                             | Bedrock (lithic)     | 10-20           |           | Very strongly cemented |            |       |                     |                   |          |
| Berks                       | Bedrock (lithic)     | 20-40           |           | Indurated              |            |       | Low                 | Low               | High     |
| Wet spots                   |                      |                 |           |                        |            |       |                     |                   |          |
| 74F2:                       |                      |                 |           |                        |            |       |                     |                   |          |
| Weikert                     | Bedrock (paralithic) | 10-20           |           | Moderately cemented    |            |       | Moderate            | Moderate          | Moderate |
|                             | Bedrock (lithic)     | 10-20           |           | Very strongly cemented |            |       |                     |                   |          |
| Berks                       | Bedrock (lithic)     | 20-40           |           | Indurated              |            |       | Low                 | Low               | High     |
| 75E2:                       |                      |                 |           |                        |            |       |                     |                   |          |
| Weikert                     | Bedrock (paralithic) | 10-20           |           | Moderately cemented    |            |       | Moderate            | Moderate          | Moderate |
|                             | Bedrock (lithic)     | 10-20           |           | Very strongly cemented |            |       |                     |                   |          |

| Depth to Top In 20-40 | Thickness<br>In | Hardness               | Initial<br>In   | Total<br>In     | for Frost<br>Action | Uncoated<br>Steel   | Concrete<br>High |
|-----------------------|-----------------|------------------------|-----------------|-----------------|---------------------|---------------------|------------------|
| 20-40                 |                 | Indurated              |                 |                 | Low                 | Low                 | High             |
|                       |                 | Indurated              |                 |                 | Low                 | Low                 | High             |
|                       |                 | Indurated              |                 |                 | Low                 | Low                 | High             |
| 10-20                 |                 |                        |                 |                 |                     |                     |                  |
| 10-20                 |                 |                        |                 |                 |                     |                     |                  |
|                       |                 | Moderately cemented    |                 |                 | Moderate            | Moderate            | Moderate         |
| 10-20                 |                 | Very strongly cemented |                 |                 |                     |                     |                  |
| 20-40                 |                 | Indurated              |                 |                 | Low                 | Low                 | High             |
|                       |                 |                        |                 |                 |                     |                     |                  |
|                       |                 |                        |                 |                 | Moderate            | Low                 | Moderate         |
|                       | 20-40           | 20-40                  | 20-40 Indurated | 20-40 Indurated | cemented            | 20-40 Indurated Low | cemented         |